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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,992	09/25/2000	Takeshi Ikegami	IJK/117	2587

26689 7590 02/28/2003

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225 WEST WACKER DRIVE  
CHICAGO, IL 60606

EXAMINER

COLON, GERMAN

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/646,992

Applicant(s)

IKEGAMI ET AL.

Examiner

German Colón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. The Amendment, filed on December 05, 2002, has been entered and acknowledged by the Examiner.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Banno et al. (US 6,313,574).

Regarding claim 1, Banno discloses a shadow mask having a plurality of slots forming beam spots, each having substantially a rectangular shape, uniformly on a fluorescent surface of a color Braun tube (see Col. 1, lines 12-25), characterized in that

said slots include a slot having substantially a rectangular shape and formed at a portion near an axis of ordinate passing a central portion of the shadow mask (see Col. 6, lines 39-44) and a curved slot formed on an outer peripheral side thereof apart from the axis of ordinate (see Fig. 7 and Col. 7, lines 1-3),

said rectangular slot is composed of a back side opening 3 formed on an electron beam incident side through an etching process so as to have substantially a rectangular shape, a front

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side opening **2** formed though the etching process so as to have substantially a rectangular shape and having a large area so as to allow the electron beam to pass and side wall sections inclining between the back side opening and the front side opening (see Figs. 7 and 8 in view of Col. 8, lines 17-19),

said curved slot is composed of a backside opening **3** formed on an electron beam incident side through an etching process so as to be curved such that both longitudinal end portions thereof are apart from said axis of ordinate (see Fig. 7 and Col. 8, lines 19-22), a front side opening **2** formed though the etching process so as to have substantially a rectangular shape and having a large area so as to allow the electron beam to pass and side wall sections inclining between the back side opening and the front side opening (see Figs. 7 and 8 in view of Col. 8, lines 19-22), and

said curving of the back side opening of the curved slot becomes large as both the longitudinal end portions are apart from the axis of ordinate (see Col. 5, lines 3-6, 24-28, and Col. 8, lines 19-22).

Regarding claim 3, Banno discloses said curved slot having an angle of less than  $10^{\circ}$  which is constituted by a curving degree indication line connecting a central point of the curved slot and a central point of an opening width between both the longitudinal end portions and the axis of ordinate passing the central slot (see Figs. 13(a) and 13(b), and Col. 5, lines 39-40 and 44-45).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banno et al. (US 6,313,574) in view of Osamu et al. (JP 01320738).

Banno discloses the claimed invention except for the limitation of “an etch surface on the front side opening side having a depth gradually reduced towards both longitudinal end portions and an etch surface on the back side opening side having a depth gradually increased”.

However, in the same field of endeavor, Osamu discloses an etch surface on the front side opening side having a depth gradually reduced towards both longitudinal end portions and an etch surface on the back side opening side having a depth gradually increased (see Figs. 1-3) in order to secure the width of the required electron beams, so the shape of the beam spot becomes a symmetrical preferable one. It would have been obvious to anyone of ordinary skill in the art at the time the invention was made to modified Banno's slot by the teachings of Osamu, since Osamu teaches that with the technique, the width of the required electron beams can be secured, so the shape of the beam spot becomes a symmetrical preferable one.

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***Response to Arguments***

6. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

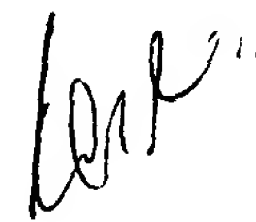
Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 703-305-5987. The examiner can normally be reached on Monday thru Friday, from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

AC  
gc

February 21, 2003

  
NIMESHKUMAR D. PATEL  
SUPERVISORY PATENT EXAMINER  
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